

Attorney Docket No.: J3734(C)  
Serial No.: 10/579,649  
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Confirmation No.: 9363

**BRIEF FOR APPELLANT**

Sir:

This is a Brief on appellant's Appeal from the Examiner's Final Rejection concerning the above-identified application.

The Commissioner is hereby authorized to charge any additional fees, which may be required to our deposit account No. 12-1155, including all required fees under: 37 C.F.R. §1.16; 37 C.F.R. §1.17; 37 C.F.R. §1.18.; 37 C.F.R. §1.136.

**BRIEF FOR APPELLANT**

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I. Real Party in Interest

The real party in interest is Conopco, Inc., d/b/a UNILEVER, a corporation of New York, having a principal place of business at 700 Sylvan Avenue, Englewood Cliffs, New Jersey 07632.

II. Related Appeals and Interferences

None

III. Status of Claims

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Eleven (11) claims are presently pending. The claims were originally filed as claims 1-13, but claims 3 and 11 have been cancelled.

B. STATUS OF THE CLAIMS

All remaining claims (independent claim 1, and dependent claims 2, 4-10, 12-13) have been rejected.

C. CLAIMS ON APPEAL

Claims 1, 2, 4-10 and 12-13 are on appeal.

IV. Status of Amendments

Claim 3 was deleted after final, and this proposed amendment will be entered for purposes of appeal (see Advisory Action, Box 7b). Accordingly, claims now pending are independent claim 1 and dependent claims 2, 4-10, 12 and 13.

V. Summary of the Claimed Subject Matter

Claims of the subject invention are mapped out (referring to specification by page and line number) as set forth below:

	CLAIM ELEMENT	SPECIFICATION
	Claim 1:	
(1)	A hair conditioning composition comprising:	Page 3, lines 3-4
(2)	60% by wt. or more of water	Page 3, line 5
(3)	From 0.1 to 10% by wt. of alkyl trimethylammonium salt wherein the alkyl group is selected from C <sub>18</sub> to C <sub>22</sub> saturated alkyl chain and mixtures thereof	Page 3, lines 6-8
(4)	From 0.02 to 5% by wt. of dialkylethyl dimethylammonium salt wherein the alkyl chains are selected from C <sub>18</sub> to C <sub>22</sub> saturated or unsaturated alkyl chains and mixtures thereof	Page 3, lines 9-12
(5)	From 0.5 to 10% by wt. fatty material comprising from 12 to 22 carbon atoms selected from the group consisting of fatty alcohols, fatty acids, alkoxylated fatty alcohols and mixtures thereof	Page 3, lines 13-16
(6)	From 0.05 to 1% potassium chloride	Page 3, line 17 Page 8, lines 5-7
(7)	wherein the wt. ratio of the alkyltrimethylammonium salt to the dialkylethyl dimethylammonium salt is from 15:1 to 2:1	Page 3, lines 18-19

CLAIM NO.	OTHER CLAIMS	SPECIFICATION
Claim 2	A composition according to claim 1, wherein fatty acid material is a monohydric primary alcohol with an alkyl chain selected from C <sub>16</sub> -C <sub>18</sub> saturated chains and mixtures thereof	Page 6, lines 22-31
Claim 4	A composition according to claim 1, wherein the alkyltrimethylammonium salt has an anion selected from the group consisting of halides, methosulphate and mixtures thereof	Page 4, lines 26-28
Claim 5	A composition according to claim 1, wherein the dialkylethyl dimethylammonium salt has an anion selected from the group consisting of halides, methosulphate and mixtures thereof	Page 5, lines 16-18
Claim 6	A composition according to claim 1, wherein alkyltrimethylammonium salt is cetyl trimethylammonium chloride	Page 5, lines 1-2
Claim 7	A composition according to claim 1, wherein the dialkylethyl dimethylammonium salt is dipalmitoylethyl dimethylammonium chloride	Page 5, lines 27-29
Claim 8	A composition according to claim 1, wherein the weight ratio of the alkyltrimethylammonium salt to dialkyl dimethylammonium salt is from 8:1 to 4:1	Page 6, lines 6-11
Claim 9	A composition according to claim 1, which further comprises hydrophobic conditioning oil	Page 9, lines 7-8
Claim 10	A composition according to claim 9, wherein the hydrophobic conditioning oil is a silicone oil	Page 14, lines 24-25
Claim 12	A method of treating the hair comprising the steps of: (i) applying to the hair a composition according	Page 20, lines 4-8



	to claim 1; (ii) rinsing the hair with water; and (iii) drying the hair	
Claim 13	A composition according to claim 1, wherein the composition is free of opacifiers that are other than components (b), (c), (d) and (e).	Page 19, lines 28-29

VI. Grounds of Rejection to be Reviewed Upon Appeal

The Grounds of Rejection to be Reviewed Upon Appeal are defined by the Examiner's rejections and are as follows:

- I. Claims 1, 2, 4-10 and 12 are rejected under 35 USC §103(a) over European Patent Publication EP 0956850 (Kruger) in view of U.S. Patent No. 5,482,703 to Pings and U.S. Patent No. 6,613,316 to Sun et al.
- II. Claim 13 is rejected under 35 USC §103(a) over European Patent Publication EP 0956850 (Kruger) and evidenced by U.S. Patent No. 6,613,316 to Sun et al.

## VII. Argument

- I. Claims 1, 2, 4-10 and 12 are rejected under 35 USC §103(a) over European Patent Publication EP 0956850 (Kruger) in view of U.S. Patent No. 5,482,703 to Pings and U.S. Patent No. 6,613,316 to Sun et al.

Typically, rinse-off hair conditioners comprise as major components a cationic surfactant in combination with a fatty material (e.g., fatty alcohols) in the form of an aqueous dispersion (page 1, lines 18-21). Typically, the compositions do not reflect or scatter light particularly well (page 1, lines 30-31). Because many consumers tend to like compositions which do scatter light well (e.g., providing more opaque look and a milky or creamy appearance), so-called opacifiers are generally added to compositions. However, since opacifiers are non-functional; many have poor biodegradability, and they may deposit on hair (providing dull or greasy feel), there is a need for alternative technology to provide an opaque look without the deficiencies associated with traditional opacifiers (page 2, lines 23-25).

Quite unpredictably, applicants have found that a combination of specific cationic salts and specific alkali metal halide salt provides a solution to the problem noted above. Specifically, applicants have provided examples showing that, if both specific cationic salts are not used and/or, if the alkali metal salt is not used, the same degree of lightness (hence opacity and reflectivity) is not achieved (see page 22, lines 4-13, for example).

Initially, applicants note that the exact manner in which the Examiner is applying the references is not entirely clear. In the final Office Action, as noted, the Examiner rejects claims over Pings and Sun et al. In the comments attached to the Advisory Action, the Examiner states that mixtures of alkylammonium salts are known by Sun and that one of ordinary skill would be motivated to use any metal salt (including potassium chloride) in the invention of Kruger as a rheology modifier as taught by Pings.

With regard to U.S. Patent No. 6,613,316 to Sun et al., applicants first note that the reference discloses uses of dialkyl quats as well as combinations of monoalkyl quats (such as cetyltrimethylammonium chloride) and dialkyl quats. However, there appears to be no disclosure specifically of dialkoyl quats and no examples of combination of monoalkyl quats with dialkoyl quats. By contrast, our invention very specifically claims dialkylethyldimethylammonium salt. This is not only a dialkoyl, but a specific dialkylethyl quat. There is certainly no motivation to make such specific combination or any reason to believe there would be associated a specific benefit (e.g., in terms of lightening) when using such combination.

With regard to U.S. Patent No. 5,482, 703 to Pings, this describes a somewhat "typical" description of cationic surfactant vehicle material which can be used in a typical hair conditioning composition (see col. 5, line 1 to col. 6, line 28). That is, the reference describes typical quaternary ammonium materials which may contain four alkyl groups (see col. 5, lines 20-26). There is no particular preference for trimethylammonium salts. Further, preferred quats are said to include dialkyldimethylammonium quats (see col. 6, lines 51-52). There is nothing about dialkoylalkyldimethyl quats

Clearly, such reference neither teaches nor suggests a combination of the specifically claimed alkyltrimethylammonium quats and dialkylethyldimethyl ammonium quats of our invention, and has no recognition of the benefit of such combination. Thus, whether or not potassium chloride is suggested as a rheology modifier is irrelevant since there is no disclosure or suggestion in Sun, Pings (or Kruger, as noted below) of the specific combination of quats of the subject invention or of their benefit as an alternate lightening (opacifying) mechanism.

With regard to EP 0956850 to Kruger, again this reference broadly discloses possible use of one or more quats (see ¶0006). A typical example is said to be cetrimonium chloride (¶0007). Again however, there is no recognition of the necessary combination of such cetrimonium with a dialkoyl alkyl dimethylammonium,

or of the resultant benefit from such combination. Certainly, the examples show only the use of centrimonium chloride alone. The fact that either could be used alone is not reason enough to use the two together. The combination with alkali metal halide, specifically potassium chloride, is even a further step removed.

While it is fine to say that it would have been obvious to make the specific combination of the invention (prima facie obviousness), even KSR demands that there must be some articulated reasoning with some rational underpinning to make such specific combination See KSR Int'l Co. v. Teleflex Inc., US 398, \_\_\_\_, 127 SCt 1727, 1741 (2007), quoting In re Kahn, 441 F.3d 977, 988 (Fed Cir. 2006).

In short, the references merely broadly disclose the use of a large, potential variety of quats in hair conditioner compositions. There are, however, no examples of the specific combination of cationic quats (let alone with specific alkali metal salt) disclosed in our invention and no prima facie case of obviousness has been made.

In view of the specific combination of cationics (as well as specific alkali metal halide) and failure of any prima facie obviousness (no reason to use specific combination), it is respectfully requested that all rejections be withdrawn and that claims, as pending, be allowed.

- II. Claim 13 is rejected under 35 USC §103(a) over European Patent Publication EP 0956850 (Kruger) and evidenced by U.S. Patent No. 6,613,316 to Sun et al.

Claim 13 is directed to compositions discussed above which are further free of opacifiers that are other than components (b), (c), (d) and (e).

For reasons noted above, Kruger '850 reference fails to disclose the necessary combination of the two specific cationics, let alone further in combination with specific alkali metal halide salts. Suitable alkyl quats or diesterquats are disclosed, but that specific compounds be chosen and then necessarily combined is not suggested. There is no reason to do so (examples disclose no such combination) and no reason to believe they would provide any benefit.

Because there is no recognition of the benefit, neither Kruger nor Sun disclose compositions which are necessarily free of opacifiers other than components otherwise specifically recited.

Thus, the compositions not only are independently novel and unobvious as claimed in claims 1, 2 4-10 and 12 discussed above but, because of applicants recognition of their benefit, the absence of opacifiers in claim 13 highlights this distinction.

In view of the amendments and discussion, it is respectfully requested that the rejection of claim 13 also be withdrawn.

Respectfully submitted,

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## VIII. Claims Appendix

The text of claims included in the appeal is:

Claim 1. A hair-conditioning composition comprising

- a) 60% by weight or more of water,
  - b) from 0.1 to 10% by weight of alkyl trimethylammonium salt wherein the alkyl group is selected from C<sub>16</sub> to C<sub>22</sub> saturated alkyl chains and mixtures thereof,
  - c) from 0.02 to 5% by weight of dialkylethyl dimethylammonium salt wherein the alkyl chains are selected from C<sub>16</sub> to C<sub>22</sub> saturated or unsaturated alkyl chains and mixtures thereof,
  - d) from 0.5 to 10% by weight of a fatty material, comprising from 12 to 22 carbon atoms, selected from the group consisting of fatty alcohols, fatty acids, alkoxyated fatty alcohols and mixtures thereof, and
  - e) from 0.05 to 1% potassium chloride,
- wherein the weight ratio of the alkyl trimethylammonium salt to the dialkylethyl dimethylammonium salt is from 15:1 to 2:1.

Claim 2. A composition according to claim 1 wherein the fatty material is a monohydric primary alcohol with an alkyl chain selected from C<sub>16</sub> to C<sub>18</sub> saturated chains and mixtures thereof.

Claim 4. A composition according to claim 1 wherein the alkyl trimethylammonium salt has an anion selected from the group consisting of halides, methosulphate and mixtures thereof.

Claim 5. A composition according to claim 1 wherein the dialkylethyl dimethylammonium salt has an anion selected from the group consisting of halides, methosulphate and mixtures thereof.

Claim 6. A composition according to claim 1 wherein the alkyl trimethylammonium salt is cetyl trimethylammonium chloride.

Claim 7. A composition according to claim 1 wherein the dialkylethyl dimethylammonium salt is dipalmitoylethyl dimethylammonium chloride.

Claim 8. A composition according to claim 1 wherein the weight ratio of the alkyl trimethylammonium salt to the dialkylethyl dimethylammonium salt is from 8:1 to 4:1.

Claim 9. A composition according to claim 1 which further comprises a hydrophobic conditioning oil.

Claim 10. A composition according to claim 9 wherein the hydrophobic conditioning oil is a silicone oil.

Claim 12. A method of treating the hair comprising the steps of;

- i) applying to the hair a composition according to claim 1,
- ii) rinsing the hair with water, and
- iii) drying the hair.

Claim 13. A composition according to claim 1 wherein the composition is free of opacifiers that are other than components (b), (c), (d) and (e).



IX. Evidence Appendix

None.

X. Related Proceedings Appendix

None.